REMARKS

Claims 1-36, 38 and 41-76 are currently pending in the subject application and are presently under consideration. Claims 1, 2, 26, 62, 63, 64, 66, 69-71, and 73-75 have been amended herein to more clearly define the claimed subject matter. Claims 3 and 76 have been cancelled herein. A listing of all claims can be found at pages 2-14.

Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

I. Rejection of Claims 1-36, 38, and 41-76 Under 35 U.S.C. §112

Claims 1-36, 38, and 41-76 stand rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. It is respectfully submitted that this rejection is improper for at least the following reasons. The subject claims are directed to statutory subject matter.

> Because the claimed process applies the Boolean principle [abstract idea] ***to produce a useful, concrete, tangible result*** … on its face the claimed process comfortably falls within the scope of §101. *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, 1358. (Fed.Cir. 1999) (Emphasis added); *See State Street Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368, 1373, 47 USPQ2d 1596, 1601 (Fed.Cir.1998). The inquiry into patentability requires an examination of the contested claims to see if the claimed subject matter, as a whole, is a disembodied mathematical concept representing nothing more than a "law of nature" or an "abstract idea," or if the mathematical concept has been ***reduced to some practical application rendering it "useful."*** *AT&T* at 1357 *citing In re Alappat*, 33 F.3d 1526, 31 1544, 31 U.S.P.Q.2D (BNA) 1545, 1557 (Fed. Cir. 1994) (Emphasis added) (holding that more than an abstract idea was claimed because the claimed invention as a whole was directed toward forming a specific machine that produced the useful, concrete, and tangible result of a smooth waveform display).

The Examiner asserts that claims 1-36, 38, and 41-76 are directed to non-statutory subject matter and, specifically, that "items" are abstract ideas and therefore not patentable. The Examiner cites *In re Warmerdam*, 33 F.3d 1354, 31 U.S.P.Q.2D (BNA) 1754 (Fed. Cir. 1994) to support the foregoing assertion. However, merely determining whether an abstract idea is claimed is ***not*** enough to deem the claimed invention not

concrete or intangible; the inquiry requires an examination to see if the claimed invention, ***as a whole***, is applied in a practical application to produce a useful, concrete, and tangible result. (*AT&T Corp., v. Excel Communications, Inc.*, 172 F.3d 1352; 1357, 1999 U.S. App. LEXIS 7221, 15-16; 50 U.S.P.Q.2D (BNA) 1447 *citing In re Alappat*, 33 F.3d 1526, 31 U.S.P.Q.2D (BNA) 1545 (Fed. Cir. 1994)).

The subject application relates generally to targeted item delivery with inventory management, such as targeted advertising with quotas and is applicable to any type of commerce-related product or service placement in which an inventory of items are managed. (*See e.g.,* pg. 1, lns. 6-8; pg. 3, lns. 1-2; and pg. 11, lns. 7-9). Independent claims 1, 62, 69, 71 and 75 have been amended herein to more clearly define the claimed subject matter.

In particular, independent claim 1 has been amended to recite *a computer-implemented method comprising* ***allocating each of a plurality of ads*** *to at least one of a plurality of clusters…* ***selecting an ad*** *from a current cluster…* ***and effecting the ad***.

Independent claim 62 has been amended to recite *a computer-implemented method comprising* ***applying each of at least one first ad to an ordered set of rules****, each rule accounting for at least a quota for each of a plurality of second ads… and,* ***effecting the second ad for each of the at least one first ad***.

Independent claim 69 has been amended to recite *a computer-implemented method comprising* ***determining at least one significant correlation between*** *a plurality of binary features of the training data* ***and a plurality of activation of ads*** *from training data,* ***determining an ad*** *…,* ***generating a rule based on the ad****, …*

Similarly, independent claim 71 has been amended to recite *a machine-readable medium having instructions stored thereon for execution by a processor to perform a method comprising* ***applying each of at least one first ad to an ordered set of rules****, …; and,* ***effecting the second ad for each of the at least one first ad***.

Independent claim 75 has been amended herein to recite a machine-readable medium having instructions stored thereon for execution by a processor to perform a method comprising … ***determining an ad*** *and at least one binary feature providing a largest activation, each rule accounting for at least a quota for the ad …,* ***generating a rule based on the ad*** *and the at least one binary feature providing the largest*

activation….

In addition, independent claim 36 recites *a computer-implemented method comprising* ***defining a plurality of clusters****, each cluster corresponding to a group of users … and,* ***allocating an ad having a particular type to at least one cluster….***

Independent claim 46 recites *a computer-implemented method comprising* ***determining an allocation for each of a plurality of ads to at least one of a plurality of clusters****… and* ***outputting the allocation*** *of each ad to at least one of the plurality of clusters.*

Independent claim 50 similarly recites *a computerized system comprising* ***a database storing a plurality of ads****, each ad having a quota… an allocator to allocate each of the plurality of ads… and a communicator to select an ad … and* ***output the ad to a user****.*

Independent claim 53 recites *a machine-readable medium having instructions stored thereon for execution by a processor to perform a method comprising* ***allocating each of a plurality of ads to at least one of a plurality of clusters****… s****electing an ad*** for a current cluster from ads allocated to the current cluster; and, ***displaying the ad.***

Likewise, independent claim 59 recites *a machine-readable medium having instructions stored thereon for execution by a processor to perform a method comprising* ***determining an allocation for each of a plurality of ads*** *to at least one of a plurality of clusters…and* ***outputting the allocation of each ad*** *to at least one of the plurality of clusters.*

The ads, recited in the independent claims, are advertisements, which are well known and used extensively to increase sales by drawing attention to a product, service, *etc.,* and are clearly not abstract ideas. The claims recite subject matter that is more than the mere manipulation of abstract ideas and provide limitations to the transformation of real world data, in the form of ads, which can be effected, displayed, output, and so forth. In addition, the specification provides various examples of practical applications. For example, the specification discloses allocation of an item (ads, products, services) such that the item is *selected* and *effected*. Allocation refers to filling each slot of a cluster to maximize the number of click-throughs of an ad on a web site. (*See e.g.,* pg. 14, lns. 14-17). Effected refers to the item being *displayed or output to a user*, and thus perceived

by the user, and can include the displaying of an ad or the displaying of a button on a web site for immediate purchase of an item by a user. (*See e.g.* pg. 11, ln. 23 to pg. 12, ln. 3). Thus, a useful, concrete, and tangible result of the subject application can be targeted advertising.

In view of at least the foregoing, it is readily apparent that the independent claims (and the claims that depend there from) reduce to a practical application that produces a useful, concrete, tangible result and is limited to practical applications in the technical arts; therefore, pursuant to *AT&T Corp. v. Excel Communications, Inc.,* 172 F.3d 1352, 1358 (Fed.Cir. 1999), the subject claims are directed to statutory subject matter pursuant to 35 U.S.C. §101. Accordingly, this rejection should be withdrawn and the subject claims allowed.

I. Rejection of Claims 1-36, 38, and 41-76 Under 35 U.S.C. §112

Claims 1-36, 38, and 41-76 stand rejected under 35 U.S.C. §112, first paragraph because current case law and the MPEP require such a rejection for claims that stand rejected under 35 U.S.C. §101. It is respectfully submitted that this rejection is improper for at least the following reasons. The rejection of the subject claims under 35 U.S.C. §101 should be withdrawn pursuant to the aforementioned comments rendering the subject rejection moot. Accordingly, this rejection should be withdrawn and the subject claims allowed.

II. Rejection of Claims 1 and 2 Under 35 U.S.C. §102(e)

Claims 1 and 2 stand rejected under 35 U.S.C. §102(e) as being anticipated by Ballard (U.S. 6,182,050). This rejection should be withdrawn for at least the following reason. Ballard does not teach or suggest each and every limitation recited in the subject claims.

> "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987). "The identical invention

> must be shown in as complete detail as is contained in the…claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ 2d 1913, 1920 (Fed. Cir. 1989).

Independent claim 1, from which claim 2 dependents, recites *a computer-implemented method comprising* ***allocating each of a plurality of ads to at least one of a plurality of clusters, based on a predetermined criterion accounting for at least a quota for each ad and a constraint for each cluster****, selecting an ad for a current cluster from ads allocated to the current cluster and effecting the ad.* Predetermined criterion is used, for example, to maximize the number of click throughs for all of the ads, given quotas and constraints. (*See e.g.,* pg. 15, lns. 8-11). Quotas can be defined as the number of times each ad should be displayed overall within all the clusters and for each item can be ad-showing quotas or item-purchase quotas, for example. (*See e.g.,* pg. 11, lns. 21-23; pg. 13, lns. 21-23). The constraint for each cluster can specify that a particular ad should not be shown within a certain cluster or can include the number of impressions by any user associated with each cluster. (*See e.g.,* pg. 3, lns 20-21 and pg. 14, lns 1-5). The ads in a current cluster can be allocated so that the expected number of clicks on an entire site is maximized. (*See e.g.,* pg. 13, lns 20-21).

Ballard relates to the distribution of advertisements to consumers. (*See e.g.,* col. 1, lns 7-9). Advertisements are provided that conform to a specific parameter (*e.g.,* demographic parameter) and an advertisement that conforms to the specific parameter is sent to the end user. (*See e.g.,* col. 9, lns, 39-48). However, Ballard does not teach or even suggest allocating a plurality of ads to account for at least a quota for each ad and a constraint for each cluster, as claimed.

Based on at least the foregoing, it is readily apparent that Ballard does not teach or even suggest all limitations recited in claim 1 (and claim 2 that depends there from). Accordingly, this rejection should be withdrawn.

CONCLUSION

The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [MSFTP222USB].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,

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